

What is claimed is:

1. An optical image retrieval method for detecting an optical image signal reflected from an image contacting surface under a transparent medium, the method comprising steps as follows:

5       generating a light projected in a vertical direction;  
          directing the light to a light-splitter unit;  
          splitting the light with the light-splitter unit and directing a transmitted light passing through the light-splitter unit to the image contacting surface under the transparent medium for producing the optical image signal;

10       reflecting the optical image signal to the light-splitter unit along an image retrieval optical axis, wherein the image retrieval optical axis overlaps with an optical axis of the transmitted light; and

          reflecting the optical image signals returned from the image contacting surface to a lens once or more with the light-splitter unit, the lens focusing  
15       the optical image signals to an image detecting element.

2. The optical image retrieval method as in claim 1, wherein the transparent medium is glass.

3. The optical image retrieval method as in claim 1, wherein images are also retrieved on a non-transparent medium.

20    4. An optical image retrieval method, providing:

          generating a light and projecting the light in a vertical direction;  
          directing the light to a light-splitter unit;  
          directing the light reflected by the light-splitter unit once or more to an image contacting surface under a transparent medium;

25       reflecting optical image signals to the light-splitter unit, wherein an image retrieval optical axis overlaps with an optical axis of light reflected by the

light-splitter unit; and

transmitting the optical image signals returned from the image contacting surface to a lens by the light-splitter unit, wherein the lens focuses the optical image signals onto an image detecting element.

5 5. The optical image retrieval method as in claim 4, wherein the transparent medium is glass.

6. The optical image retrieval method as in claim 4, images are also retrieved on a non-transparent medium.

7. An optical image retrieval method, providing:

10 generating a light and projecting the light in a horizontal direction;

directing the light to a light-splitter;

directing light reflected by the light-splitter to an image contacting surface under a transparent medium;

reflecting optical image signals onto the light-splitter unit, wherein an  
15 image retrieval optical axis overlaps with an optical axis of light reflected by the light-splitter;

transmitting optical image signals returned from the image contacting surface to a lens by the light-splitter, wherein the lens will focus the optical image signals onto an image detecting element.

20 8. The optical image retrieval method as in claim 7, wherein the transparent medium is glass.

9. The optical image retrieval method as in claim 7, wherein images are also retrieved on a non-transparent medium.

10. An optical image retrieval method, providing:

25 generating a light and projecting the light in a horizontal direction;

directing the light to a lens unit;

directing the light reflected by the lens unit twice to an image contacting surface under a transparent medium;

reflecting optical image signals to the lens unit, wherein an image retrieval optical axis overlaps with the optical axis of the light reflected twice by the lens  
5 unit;

transmitting light returned from the image contacting surface to a lens by the lens unit, wherein the lens focuses the light onto an image detecting element.

11. The optical image retrieval method as in claim 10, wherein the transparent  
10 medium is glass.

12. The optical image retrieval method as in claim 10, wherein images are also retrieved on a non-transparent medium.